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EXAMINER

BUTLER, PATRICK

ART UNIT	PAPER NUMBER
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1791

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/757,828	PARISH, BART P.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Patrick Butler	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 May 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2,3,7-21 and 30-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2,3,7-21 and 30-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's acknowledgement of election without traverse of Group I, Claims 1-21 and 30-33, in the reply filed on 27 February 2007 is acknowledged.

### ***Specification***

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Method for manufacturing combustible products.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 3, 7, 8, 12, 13, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cantrell (US Patent No. 6,017,475).

With respect to Claim 2, Cantrell teaches a method of making a product using a combined combustible material of household garbage including plastic bottles and paper (method of making combustible products from recyclable materials; feedstock is ... thermoplastic material, cellulosic fiber) (see col. 1, lines 14-15; col. 5, lines 1-7; col. 11, line 64 through col. 12, line 4). As the household garbage contains materials that have been brought together in the production of the garbage, it is therefore already, to some degree, a blended material (blending feedstock). Cantrell teaches reducing

particle size by using a grinder (inputting said blended feedstock into a grinder for the purpose of reducing the size of said blended feedstock) (see col. 9, lines 9-15; col. 11, line 64 through col. 12, line 4), squeezing the shards, applying high pressure, and extruding the material into bricks, blocks, or fire logs (compressing and extruding said reduced blended feedstock through a cuber so as to create combustible products) (see col. 9, lines 54-57; col. 10, lines 17-25 and 35-46; col. 11, lines 20-27). In extruding, the location on the apparatus that the material is extruded from would be the die hole used to form combustible products. Moreover, as the expeller and extruder would constitute at least two dies, there would be at least two die holes. It is noted on page 9, lines 5-9, within paragraph [0023], of Applicant's specification that Applicant defines cuber to encompass an apparatus that makes items of a variety of shapes:

The term "cube" refers to a discrete product of any size or shape that contains both cellulosic material and thermoplastic material. The cube need not be square or even symmetrical. While it may be useful to form the products in the shape of cubes, they can be any suitable symmetrical configuration such as the shape of a tube or a sphere.

This limitation is taught by Cantrell's bricks, blocks, and fire logs. With respect to the limitation "substantially" regarding the selection of feedstock, the examiner interprets the limitation to require at least one of the Markush members listed in more than a trace amount. Therefore, the limitation was met by the plastic bottle article as well as wood or cloth taught by Cantrell rather than trace amount such mining waste with mistakenly collected windblown paper litter such as material from a quarry or sheet metal with

paper litter or miniscule product labels such as material collected in large construction metal recycling bins.

Cantrell teaches a method of making combustible products as previously described with respect to claim 1.

With respect to Claims 2, 7, 12, and 17, Cantrell does not appear to explicitly teach that the grinder operating torque is within the claimed range (e.g., between about 18,000 and 20,000 ft-lbs of torque per motor shaft). However, in this regard, Cantrell further teaches that the grinder operates at a rated velocity depending upon the configuration of the machine used and that it rotates so that the work piece is ground to the desired shape, size, and finish (see 9, lines 27-35). Given that the velocity and material is ground properly, the torque would be a function of these variables. As such, Cantrell obvious recognizes that the grinder operating torque is a result-effective variable. Since that the grinder operating torque would be a result-effective variable, one of ordinary skill in the art would have obviously determined the optimum grinder operating torque applied in the process of Cantrell through routine experimentation based upon rated velocity and grinding to the desired shape, size, and finish.

With respect to Claims 3, 8, 13, and 18, Cantrell does not appear to explicitly teach that the grinder operating speed is within the claimed range (e.g., between about 75 to about 80 rpms). However, in this regard, Cantrell further teaches that the grinder operates at a rated velocity depending upon the configuration of the machine used and that it rotates so that the work piece is ground to the desired shape, size, and finish (see 9, lines 27-35). As such, Cantrell obvious recognizes that the grinder operating speed

is a result-effective variable. Since that the grinder operating speed would be a result-effective variable, one of ordinary skill in the art would have obviously determined the optimum grinder operating speed applied in the process of Cantrell through routine experimentation based upon rated velocity and grinding to the desired shape, size, and finish.

Claims 9-11, 14-16, and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cantrell (US Patent No. 6,017,475) as applied to claims 2, 7, 12, and 17 above, and further in view of Jesse (US Patent No. 5,342,418).

With respect to Claims 9, 14, and 19, Cantrell teaches making combustible products from recyclable materials as previously described. Cantrell teaches using combustible rubbish (see col. 1, lines 13-16 and 25-31) including plastic bottles (see col. 5, lines 1-7).

Cantrell does not appear to expressly teach polyethylene, polypropylene, and polybutylene as components of the combustible rubbish.

Jesse teaches that polyethylene, polypropylene, and polybutylene (thermoplastic material is selected from the group consisting of polyethylene, polypropylene ... polybutylene) are elements of combustion obtained from disposable diapers (recyclable materials) (see col. 7, 22-40 and 49-61).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the polymers in disposable diapers as taught by Jesse in the process of making combustible products as taught by Cantrell because Cantrell requires combustible rubbish and Jesse teaches combustible disposable material.

Moreover, Jesse teaches that the material is well known to be recycled to make combustible products (see col. 7, 22-40 and 49-61).

With respect to Claims 10, 11, 15, 16, 20, and 21 it is noted that there is no positively claimed step of producing disposable diapers, sanitary pads, adhesive liners, and hospital gowns. Thus, any materials in disposable diapers, sanitary pads, adhesive liners, and hospital gowns would be materially identical to byproducts and waste of production. Jesse teaches using disposable diapers and sanitary pads (hygiene pads) (see col. 7, lines 49-61).

Claims 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cantrell (US Patent No. 6,017,475) as applied to Claim 2 above, and further in view of Wesley et al. (US Patent No. 4,789,507).

Cantrell teaches a method of making combustible products as previously described with respect to claim 2.

With respect to Claims 30 and 31, Cantrell does not appear to explicitly teach that the grinder operating torque is within the claimed range (e.g., between about 18,000 and 20,000 ft-lbs of torque per motor shaft). However, in this regard, Cantrell further teaches that the grinder operates at a rated velocity depending upon the configuration of the machine used and that it rotates so that the work piece is ground to the desired shape, size, and finish (see 9, lines 27-35). Given that the velocity and material is ground properly, the torque would be a function of these variables. As such, Cantrell obvious recognizes that the grinder operating torque is a result-effective variable. Since that the grinder operating torque would be a result-effective variable,

one of ordinary skill in the art would have obviously determined the optimum grinder operating torque applied in the process of Cantrell through routine experimentation based upon rated velocity and grinding to the desired shape, size, and finish.

Cantrell does not expressly teach monitoring the operational characteristics of said grinder and cuber using a software application. It is noted that there is no claimed step of controlling, regardless of any data "monitor[ed]." Therefore, any mentioning of any process monitoring involving 1) software and 2) a grinder or extruder (cuber) would meet the limitations of the claim since any parameter could be used to control the process regardless of whether or not specific controlling is taught.

Wesley teaches that when using an extruder, the speed of the extruder (cuber; speed of the cuber) is monitored as well as the pump outlet pressure (cuber; the pressure required to perform the cubing operation) (see col. 8, lines 41-56).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Wesley's monitoring with Cantrell's process of making combustible products in order to form a feedback control of the process as well as to control the rate of flow into the extruder (cuber) (see col. 8, lines 41-56).

With respect to Claim 32, Cantrell does not appear to explicitly teach that the grinder operating speed is within the claimed range (e.g., between about 75 to about 80 rpms). However, in this regard, Cantrell further teaches that the grinder operates at a rated velocity depending upon the configuration of the machine used and that it rotates so that the work piece is ground to the desired shape, size, and finish (see 9, lines 27-35). As such, Cantrell obvious recognizes that the grinder operating speed is a result-



effective variable. Since that the grinder operating speed would be a result-effective variable, one of ordinary skill in the art would have obviously determined the optimum grinder operating speed applied in the process of Cantrell through routine experimentation based upon rated velocity and grinding to the desired shape, size, and finish.

Claims 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cantrell (US Patent No. 6,017,475) in view of Wesley et al. (US Patent No. 4,789,507) as applied to claim 30 above, and further in view of Jesse (US Patent No. 5,342,418).

With respect to Claim 33, Cantrell in view of Wesley teaches making combustible products from recyclable materials as previously described. Cantrell teaches using combustible rubbish (see col. 1, lines 13-16 and 25-31) including plastic bottles (see col. 5, lines 1-7).

Cantrell does not appear to expressly teach polyethylene, polypropylene, and polybutylene as components of the combustible rubbish.

Jesse teaches that polyethylene, polypropylene, and polybutylene (thermoplastic material is selected from the group consisting of polyethylene, polypropylene ... polybutylene) are elements of combustion obtained from disposable diapers (recyclable materials) (see col. 7, 22-40 and 49-61).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the polymers in disposable diapers as taught by Jesse in the process of making combustible products as taught by Cantrell because Cantrell requires combustible rubbish and Jesse teaches combustible disposable material.

Moreover, Jesse teaches that the material is well known to be recycled to make combustible products (see col. 7, 22-40 and 49-61).

***Response to Arguments***

Applicant's arguments filed 27 February and 18 May 2007 have been fully considered but they are not persuasive.

Applicant argues with respect to the claim objections and 35 USC 112 rejections. Applicant's arguments appear to be on the grounds that:

1) The amendments to the claims obviate the claim objections and 35 USC 112 rejections.

Applicant argues with respect to the 35 USC § 102(b) rejections. Applicant's arguments appear to be on the grounds that:

2) Cancellation of Claims 1 and 4-6 make the 35 USC § 102(b) rejections of them moot.

Applicant argues with respect to the 35 USC § 103(a) rejections. Applicant's arguments appear to be on the grounds that:

3) The optimum torque ranges claimed are not obvious since routine experimentation to determine them is not discussed in Cantrell.

4) There is no teaching to combine Cantrell and Jesse since Cantrell uses garbage, which is limited by Cantrell's definition to "decomposable wastes from food" (see col. 11, line 64 through col. 12, line 12), and Jesse uses thermoplastic resins via disposable diapers.

5) Since the purpose of Cantrell is to convert garbage to useful items, using the fuel pellet material of Jesse would not create useful Cantrell's intended useful item.

6) Using garbage as the feedstock of Jesse is contrary to Jesse's teaching of carefully selected composition of waste material (col. 6, lines 26-45).

7) There is no suggestion to combine the prior art since Cantrell pertains to processing garbage into useful and Jesse's materials used do not meet Cantrell's definition of garbage and Jesse's process is for making fuel pellets rather than useful items.

8) Cantrell and Jesse are non-analogous since their purposes are different. Specifically, Cantrell is intended for useful items and Jesse is intended for fuel pellets.

9) Since Wesley's monitoring is for processing organosilicon preceramic polymer to make preceramic fibers and Cantrell processes garbage and rubbish, there is no basis for combining Wesley's monitoring process with Cantrell's processing.

10) Processing garbage of Cantrell in Wesley's control process would defeat the purpose of improving processing of organosilicon preceramic polymer.

11) Cantrell and Wesley are non-analogous since their purposes are different. Specifically, Cantrell is intended for useful items made from rubbish and garbage and Wesley's monitoring is for processing organosilicon preceramic polymer.

The Applicant's arguments are addressed as follows:

1) In view of Applicant's amendment of claim 31, the Examiner withdraws the previously set forth objection and 35 U.S.C. 112, second paragraph rejection, as

detailed in the Claim Objections and Claim Rejections - 35 USC § 112 sections of the Office Action dated 11 October 2006.

2) In view of Applicant's canceling of Claims 1 and 4-6, the Examiner withdraws the previously set forth 35 USC § 102(b) rejections as detailed in the Claim Rejections - 35 USC § 102(b) section of the Office Action dated 11 October 2006.

3) As described above, Cantrell teaches optimizing the rated velocity and position, and the rotational force or torque would be a function of the optimization (see 9, lines 27-35). Thus, the torque is optimized. It is optimized the so that the work piece is ground to the desired shape, size, and finish (see 9, lines 27-35).

4 and 7) Since Cantrell includes combustible rubbish (see col. 1, lines 13-16 and 25-31), discussion of whether Jesse's disposable diapers meet the limitation of garbage as discussed in Cantrell is moot. Further clarifying combustible rubbish of Cantrell, Cantrell teaches using plastic bottles (including plastic bottles (see col. 5, lines 1-7).

5, 7, and 8) Cantrell acknowledges fire logs (fuel pellets) as useful items (see col. 10, lines 35-46).

6 and 10) Since Jesse's material and Wesley's control process are used to modify Cantrell's process, discussion of modifying Jesse's process or Wesley's control process with Cantrell's material is moot.

9 and 11) The motivation to combine Cantrell's process with Wesley's control process is Wesley's teachings' providing control for extrusion, and Cantrell and Wesley are analogous as relied upon for combining because of their similarity of both being extrusion processes (see Wesley, col. 8, lines 41-56).

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick Butler whose telephone number is (571) 272-8517. The examiner can normally be reached on Mon.-Thu. 7:30 a.m.-5 p.m. and alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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